

# [UV PHOTODETECTOR]

## Abstract

An UV photo-detector having a GaN-based interlayer is provided. Because of the excellent insulating property of the GaN-based interlayer and an excellent Schottky contact between the GaN-based interlayer and electrodes of the device, the leakage current of the device is substantially reduced. For example, the material of the GaN-based interlayer includes  $\text{Al}_x\text{In}_y\text{Ga}_{1-x-y}\text{N}$ , in which  $x \geq 0$ ,  $y \geq 0$ ,  $1 \geq x + y$ . The GaN-based interlayer described above is manufactured without requiring a high temperature treatment process after the epitaxy process, and thus the process flow is simplified. Therefore, an UV photodetector having an excellent performance is obtained.